

SANDRA M. STITH, KAREN H. ROSEN, AND KIMBERLY A. MIDDLETON  
*Virginia Polytechnic Institute*

AMY L. BUSCH *University of California–Berkeley\**

KIRSTEN LUNDEBERG *Virginia Polytechnic Institute*

RUSSELL P. CARLTON *Vienna Family Therapy Center\*\**

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## The Intergenerational Transmission of Spouse Abuse: A Meta-Analysis

*This study uses meta-analytic procedures to examine the relationship between growing up in a violent home and subsequently becoming part of a violent marital relationship. Our meta-analysis examines published and unpublished research studies that investigate the relationship between witnessing or experiencing family violence in childhood and receiving or perpetrating violence in an adult heterosexual cohabiting or marital relationship. The findings of this meta-analysis suggest there is a weak-to-moderate relationship between growing up in an abusive family and becoming involved in a violent marital relationship. Differential effects of gender and sample type are also discussed.*

The intergenerational transmission of violence is one of the most often studied explanations of part-

ner violence. Through the intergenerational transmission process, children learn how to behave both by experiencing how others treat them and by observing how their parents treat each other. Social learning theory (Bandura, 1977; Bandura, Ross, & Ross, 1962) provides the theoretical rationale for understanding how marital violence is transmitted intergenerationally. According to social learning theory, children learn through direct behavioral conditioning and by imitating the behavior they have observed or seen reinforced in others. Therefore, children who grow up in families in which they witness interparental violence or experience child abuse are more likely to imitate or tolerate these behaviors than are children from nonviolent homes.

Because the intergenerational transmission of family violence is supported in a number of empirical studies, it often is accepted as a given. That is, the contention that children who are abused or who witness interparental aggression grow up to be abusers has come to be seen as a “deterministic truism” (Straus & Gelles, 1995, p. 19). Nonetheless, many studies suggesting a relationship between growing up in an aggressive environment and later behaving aggressively in the home are based on anecdotal reports or on data drawn from

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Department of Human Development, Virginia Tech, 7054 Haycock Road, Falls Church, VA 22043 (sstith@vt.edu).

\*University of California, Berkeley, Department of Psychology, 94720.

\*\*Vienna Family Therapy Center, 1980 Gallows Road, Suite 200, Vienna, VA 22182.

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distinctive populations, such as clinical populations of abused children (Kashani, Shekim, Burk, & Beck, 1987) or battered women in shelters (e.g., Walker, 1979). A closer look at an ever-growing body of evidence reveals that empirical research has inconsistently supported the intergenerational transmission of violence theory. The manner in which childhood events influence contemporary behavior remains unclear.

This literature has been reviewed in a narrative fashion by many authors (e.g., Hotaling & Sugarman, 1986; Kaufman & Zigler, 1987; Rosenberg, 1994). Given the often-contradictory nature of much of this research, it is not surprising that reviewers sometimes have reached discrepant conclusions. For example, in their review of literature, Hotaling and Sugarman concluded that witnessing violence in one's family of origin was the most consistent risk marker for behaving aggressively as an adult. By contrast, in a more recent publication, Hotaling and Sugarman (1990) failed to confirm the association between family-of-origin violence and current marital aggression once other risk factors were controlled. Other studies found a weak link (e.g., Tontodonato & Crew, 1992) or no link between aggression in the family of origin and subsequent violent behavior as an adult (MacEwen & Barling, 1988). Therefore, although growing up in a violent family may put one at risk for using violence as an adult, the relationship is far from absolute. The fact remains that most adults who grow up in violent homes do not become violent adults (Kaufman & Zigler, 1987). One purpose of the current meta-analysis is to determine if family-of-origin violence has a significant effect on perpetration or victimization in adult intimate relationships. If we find that it does, the second purpose of this meta-analysis is to clarify factors moderating the relationship between family-of-origin violence and adult violence and victimization. Clearly, there is no simple explanation for how growing up in a violent home puts one at risk for violence as an adult. This study hopes to add clarity to this issue.

Narrative reviews of this literature have contributed much to our understanding of the intergenerational transmission of domestic violence. A meta-analysis has not been attempted, however, despite a sufficient number of studies to conduct such a quantitative review. Meta-analysis is a family of statistical techniques that are used to evaluate results from a number of studies in a given research area. In contrast to a traditional literature review (in which subjective evaluations rule),

meta-analysis involves statistically combining the results from a number of studies and tends to be more objective. Accordingly, the major purpose of this study is to use meta-analytic procedures (Cooper and Hedges, 1994) to estimate the relationship between growing up in a violent home and subsequently becoming part of a violent intimate relationship as an adult.

#### DIFFERENTIAL EFFECTS

One aspect of the complexity in the intergenerational transmission of domestic violence theory lies in the potential differential effects of witnessing versus experiencing aggression during childhood. Are adults who observed violent interactions between their parents more likely to be violent in their marital relationships than those who experienced violent parenting practices? Several studies have provided support for a differential effect of witnessing interparental violence versus experiencing harsh parenting (Cappell & Heiner, 1990; Mihalic & Elliott, 1997; Simons & Johnson, 1998). Another element of complexity lies in whether one who grows up in a violent home is at risk for becoming a perpetrator or a victim of spouse abuse. Some studies have provided empirical support for the notion that growing up in an aggressive family increases the probability of being a victim of spouse abuse (Cappell & Heiner; Mihalic & Elliot; Simons, Johnson, Beaman, & Conger, 1993), whereas other studies have provided support for the notion that growing up in an aggressive home increases the probability of being a perpetrator of spouse abuse (e.g., Caesar, 1988).

A third element of complexity relates to gender. Recently, theorists have suggested that the intergenerational transmission of violence may operate differently for men and women. The need for a gender sensitive application of the intergenerational transmission of violence theory has been supported empirically in a number of studies (e.g., Langhinrichsen-Rohling, Neidig, & Thorn, 1995; Mihalic & Elliott, 1997). Contradictory findings have emerged from gender-sensitive research examining the intergenerational transmission of marital aggression. For example, the majority of studies find a substantial link between exposure to parental violence and men's use of violence toward their spouses (Barnett, Miller-Perrin, & Perrin, 1997), yet not all studies find this link (Cappell & Heiner, 1990). Similarly, some studies find that socialization experiences predict women's vi-

olence (Malone, Tyree, & O'Leary, 1989), whereas other studies find that women do not learn the perpetrator role in their families of origin (Cappell & Heiner). On the other hand, women who grow up in violent families may be somewhat more likely to become victims of spouse abuse (Cappell & Heiner; Dumas, Margolin, & John, 1994), and some studies show that men learn vulnerability in their families of origin as well (Cappell & Heiner).

The role socialization plays in women's violence is especially unclear, as well as controversial (Barnett et al., 1997). That is, because some domestic violence researchers (e.g., Saunders, 1986) see women's violence as primarily defensive, the idea that women, like men, learn to be perpetrators of violence from their family of origin is disputed.

Finally, an interesting, but much less studied question is, "What are the differential effects of the violent parent's gender on the socialization outcomes for men and women?" In the original social learning research, Bandura and his colleagues (Bandura et al., 1962) reported that the gender of the model, not only the observer's gender, has an impact on the amount of imitated violence. Consequently, the witnessing of one's father hitting one's mother may have a stronger relationship to domestic violence than if the family-of-origin violence involved mother-to-father violence. Similarly, experiencing violence at the hand of one's father may have a differential impact on subsequently perpetrating or receiving marital violence than being physically assaulted by one's mother.

The purpose of the present research is to explore the relationship between growing up in violent homes and then later perpetrating or receiving marital violence. Specifically, we were interested in computing effect sizes for relationships between spouse abuse and different childhood experiences: (a) childhood familial violence of any kind (either experiencing parent-to-child violence or witnessing interparental violence), (b) experiencing parent-to-child violence, and (c) witnessing interparental violence. We were also interested in two moderator variables that might impact these relationships: (a) respondent's gender and (b) setting of the sample (i.e., community versus clinical).

#### META-ANALYTIC HYPOTHESES

Three hypotheses guided this meta-analysis. First, there will be a significant relationship between

growing up in a violent home and being a perpetrator of spouse abuse. Second, there will be a significant relationship between growing up in a violent home and being a victim of spouse abuse. Third, there will be gender differences in the impact of growing up in a violent home. Specifically, we hypothesized that for men, the effect of growing up in a violent home will be more strongly related to becoming a perpetrator of spouse abuse than it will for women. Growing up in a violent home will be related more strongly to becoming a victim of spouse abuse for women than it will be for men. We based our prediction of gender differences on patriarchal theory, which suggests that men are socialized to be aggressive and are accustomed to using violence to settle disputes (Waldo, 1990, as cited in Sugarman & Frankel, 1996). Further, Sugarman and Frankel suggested that men are socialized to value instrumental goals (e.g., task accomplishment, dominance, power attainment), whereas women are socialized to value interdependence or nurturant goals. Thus, the magnitude of the effect that growing up in a violent home has on becoming a perpetrator or victim of spouse abuse may be different for men and women because of the influence of stereotypical socialization practices.

Other research questions were determined a priori but were not given directional hypotheses because of inconsistent support in previous literature. These included the differential effects for the setting from which the sample was derived (community or clinical) and the type of childhood violence (experienced or witnessed). We anticipated that setting would be an important variable because of the work of Michael Johnson (1995). Johnson, in his review of evidence from large-sample survey research and from qualitative and quantitative data gathered from women's shelters, suggested that there are two distinct forms of violence taking place within families: common couple violence and patriarchal terrorism. The distinction between common couple violence (most likely to be found in community samples) and patriarchal terrorism (most likely to be found in clinical samples) has important implications for treatment and policy. Therefore, we looked at setting as an important moderating variable and looked at the effect of setting in each relationship. Although we have not proposed a formal directional hypothesis, we anticipate that clinical samples (which include samples drawn from domestic violence programs and shelters) will represent more severe levels of domestic violence and thus show

a stronger relationship with family-of-origin violence than when one analyzes community sample data. We also wanted to understand the relationship between the type of childhood violence (experienced or witnessed) and adult perpetration or victimization. As mentioned earlier, several studies have provided support for a differential effect of witnessing interparental violence versus experiencing harsh parenting. Inconsistencies in this research make a directional hypothesis premature, however.

## METHOD

### *Location of Research Studies*

Several strategies were used to identify potential studies for the meta-analysis. First, an electronic literature search for the years 1980 through 1997 was performed on the following databases: *PsychLit*, *Sociological Abstracts*, *Social Sciences Abstracts*, *MEDLINE*, *Educational Resources Information Center (ERIC)*, *Social Sciences Citation Index*, and *Dissertation Abstracts International*. Electronic databases containing conference proceedings and papers presented at conferences were also searched. The searches used combinations of the following keywords: marital, spouse, intergenerational, aggression, violence, abuse, and batter. The reference section of each located study was then manually searched for additional sources. Finally, several dissertations, unpublished studies, studies in press, and conference papers were obtained by contacting the authors personally. The literature search yielded more than 160 studies.

### *Criteria for Study Inclusion*

The central criterion for inclusion in the meta-analysis was that the study examined the relationship between witnessing, experiencing, or both witnessing and experiencing violence in childhood and receiving or perpetrating violence in an adult heterosexual marital relationship. We were interested in physical violence between intimate partners; therefore, studies that focused exclusively on psychological or emotional abuse were excluded. Nearly 20 studies were excluded because they focused solely on psychological or sexual abuse or combined these with physical violence. Two studies were excluded because they dealt with violence in lesbian couples. Studies also needed to have quantitative data that permitted the

calculation of at least one effect size. Approximately 26 studies were excluded because of incomplete or inadequate statistics. Eight of these articles contained no comparison group. In four of the articles, measures of spouse abuse were integrated with other forms of violence, such as child abuse. Four articles did not differentiate between genders. Ten other manuscripts did not have sufficient statistics. We attempted to contact each of the authors with limited success. Finally, four studies were eliminated because they used data from studies already included.

A total of 39 studies remained that met the criteria and were included in the present meta-analysis. These studies are marked with an asterisk in the reference list. Collectively, these studies involved 12,981 individuals. The final sample of studies included 24 journal articles, eight dissertations, three book chapters, and four unpublished conference papers. The studies were published or presented between 1978 and 1997.

### *Coding Procedure*

A detailed coding form was developed and refined as we went along. The final coding form included variables regarding the study (e.g., date, source of publication, author), the sample (e.g., number of participants, number of groups, gender, ethnicity, setting, relationship type), the instrument(s) used (i.e., CTS, CTS adapted, Other, Combination), the research questions addressed, and the quality of the study (validity and reliability of instruments, sampling techniques, clear discussion of limitations, sample described clearly, and a subjective rating of quality), in addition to statistics needed to compute effect sizes. Studies that included samples from both community and clinical populations (e.g., domestic violence treatment programs) were coded as clinical.

A six-member research team met weekly for 2-hour periods over several weeks to achieve reliability in coding and to refine the code sheet so that each team member was clear about the information needed to complete the form. Coding conventions were developed for recurring situations (e.g., definitions of settings). Two research team members coded each manuscript. The intercoder agreement was high, ranging from 85% to 100%. The highest agreement occurred with variables such as year of publication and form of publication. The lowest agreement occurred with variables such as subjective rating of quality. When disagreement occurred, team members resolved

them. If they were unable to reach consensus, they met with one of the team leaders to resolve the disagreement. All studies coded by junior members of the research team were also coded by one of the team leaders to further insure coding accuracy.

### *Calculating Effect Sizes*

Using the meta-analytic computer program D-Stat (Johnson, 1989), 103 effect-size estimates (i.e.,  $r$  coefficients) were derived from the 39 studies included (see Appendix A). The D-Stat statistical software program calculated  $r$  coefficients from a variety of statistics: (a) means and standard deviations, (b)  $t$  tests, (c)  $F$  tests (analyses of variance; ANOVAS), (d)  $r$  values, (e)  $\chi^2$  values (f) proportions or frequencies, and (g)  $p$  values. Several studies reported nonsignificant findings without reporting statistical details (e.g., exact  $p$  values). Because nonsignificant findings are as important in a meta-analysis as significant findings, we estimated five effect sizes from these studies by assuming a  $p$  value of .5 (Amato & Keith, 1991). Signs were affixed to effect sizes to reflect the direction of the relationship between childhood experiences and partner violence (a positive sign indicating a positive relationship; a negative sign indicating a negative relationship).

Choosing an appropriate unit of analysis (e.g., individual studies or dependent measures) is a critical feature of a meta-analysis. Although effect sizes can be calculated for each dependent measure in a study, they usually have to be combined or averaged in some way because the number of effect sizes per study varies (Durlak & Lipsey, 1991). If all effect sizes are used in the meta-analysis, studies with more effect sizes carry more weight than do studies with only one effect size. For this reason, effect size is rarely the unit of analysis. One possible strategy to deal with the variability in number of effect sizes per study is to average the effect sizes and to use only one effect size per study. A drawback to this strategy is that different types of dependent measures may yield effects of different magnitudes, and averaging across all the measures would obscure these differences (Durlak & Lipsey).

We used a different strategy and calculated an effect size for each distinct construct or question addressed in the study (Durlak & Lipsey, 1991). We also calculated separate effect sizes when data were reported separately for subgroups of male or female respondents. Because significance tests re-

quire that effect sizes be independent, if two or more effect sizes were generated within the same construct (or question), the test with the greater statistical power was used to compute the effect size. In several articles, longitudinal data were analyzed. For example, researchers examined the relationship between childhood experience with violence and adult violence at the time of marriage, 6 months later, and 1 year later. These three effect sizes were averaged for this meta-analysis. In several cases, two or more studies were based on the same data set. If different questions were addressed, each effect size was entered. If the same question was addressed with the same data set in more than one article, the effect size from only one article was used.

### RESULTS

Effect sizes, type of publication (dissertation, journal, book, conference paper), childhood experience (witness interparental violence, experience child abuse, or both witness and experience), sample size, gender, and whether the data were collected from a community or a clinical sample are reported in the Appendices for each study used to calculate the weighted effect size for the two outcome measures, perpetrating spouse abuse and becoming a victim of spouse abuse. For example, the first line of Appendix I reports data from a dissertation conducted by Annette-Barnard, using a female sample, in which the effect size ( $r$ ) between witnessing interparental violence as a child and becoming a perpetrator of spouse abuse was .41. The sample was taken from a clinical population.

#### *Perpetrators of Spouse Abuse*

To examine the overall effect of growing up in a violent home and subsequently perpetrating spouse abuse, a total of 63 effect-size estimates were computed. Small, but significant effect sizes emerged from combining these estimates weighted by sample size (mean  $r = .18$ ,  $p < .001$ ) (Table 1). According to Cohen (1969), an effect size using the  $r$  statistic is large if above .50, medium at .30, and small at .10. Therefore, our results indicate that although growing up in a violent home is significantly related to perpetrating spouse abuse, the strength of the relationship is small to medium.

Table 1 also presents the results of a series of analyses conducted to enhance our understanding

TABLE 1. AVERAGE EFFECT-SIZES FOR THE RELATIONSHIP BETWEEN GROWING UP IN A VIOLENT HOME AND BECOMING A PERPETRATOR OF SPOUSE ABUSE

Variable	Number of Effects	Mean $r$	Within-Category Test of Homogeneity ( $Q^w$ )	Between-Category Test of Homogeneity $Q^b$
Total Sample				
Overall	63	.18****	205.42*	
Experience child abuse	30	.16****	72.83****	.93
Witness Interparental abuse	29	.18****	120.90****	
Gender Comparisons				
Male	46	.21****	160.66****	20.17****
Female	17	.11****	24.36	
Setting Comparisons				
Community	26	.12****	38.73*	87.69****
Clinical	37	.30****	77.06****	
Experience Child Abuse Subsample				
Gender Comparisons				
Male	22	.19****	59.13****	10.51***
Female	8	.10****	3.06	
Setting Comparisons				
Community	13	.11****	12.71	30.24****
Clinical	17	.27****	29.23*	
Witness Interparental Abuse Subsample				
Gender Comparisons				
Male	20	.21****	93.25****	6.92**
Female	9	.13****	20.64*	
Setting Comparisons				
Community	12	.11****	21.98*	57.72****
Clinical	17	.35****	39.95****	

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .005$ . \*\*\*\* $p < .001$ .

of the relationship between growing up in a violent home and perpetrating spouse abuse. The within-category test of homogeneity ( $Q^w$ ) indicates how much variance there is within each category. The between-category test of homogeneity indicates the amount of variance between categories. There is a significant relationship between experiencing child abuse and perpetrating spouse abuse (mean  $r = .16$ ,  $p < .001$ ) and between witnessing interparental violence and perpetrating spouse abuse (mean  $r = .18$ ,  $p < .001$ ). Four effect sizes that were included in determining the overall effect size were omitted from the analysis of the type of family-of-origin abuse because the abuse experienced was unspecified. Although the sample of participants who witnessed interpersonal violence and those who experienced child abuse were not independent, we ran comparisons between these two groups. No significant differences existed between the effect-size estimate for wit-

nessing interparental violence and the effect-size estimate for experiencing child abuse and perpetrating spouse abuse ( $Q^b = 93$ ,  $p > .05$ ).

Table 1 also presents the results of moderator analyses conducted on the perpetrator data set. The gender of the respondent had a significant impact on the relationship between growing up in a violent home and later becoming a perpetrator of spouse abuse (men: mean  $r = .21$ ,  $p < .001$ ; women: mean  $r = .11$ ,  $p < .001$ ) ( $Q^b(1) = 20.17$ ,  $p < .001$ ). That is, males growing up in a violent home are much more likely to become perpetrators of spouse abuse than are females. The setting from which the sample was derived (clinical or community) also was significantly related to growing up in a violent home and becoming a perpetrator of spouse abuse (community: mean  $r = .12$ ,  $p < .001$ ; clinical: mean  $r = .30$ ,  $p < .001$ ) ( $Q^b(1) = 87.69$ ,  $p < .001$ ). The relationship between growing up in a violent home and sub-

sequently becoming a perpetrator of spouse abuse was stronger in clinical samples than it was in community samples.

Next, we looked at the effects of moderators on two subsamples of the perpetrator data set, perpetrators who experienced child abuse and perpetrators who witnessed interparental violence. The gender of the respondent had a significant impact on the relationship between experiencing child abuse and later becoming a perpetrator of spouse abuse (men: mean  $r = .19$ ,  $p < .001$ ; women: mean  $r = .10$ ,  $p < .001$ ) ( $Q^b(1) = 10.51$ ,  $p < .001$ ). The relationship between experiencing child abuse and subsequently becoming a perpetrator of spouse abuse was significantly stronger for men than for women. The setting also had a significant impact on the effect size for the relationship between experiencing child abuse and later becoming a perpetrator of spouse abuse (community: mean  $r = .11$ ,  $p < .001$ ; clinical: mean  $r = .27$ ,  $p < .001$ ) ( $Q^b(1) = 30.24$ ,  $p < .001$ ).

The gender of the respondent also had a significant impact on the effect size for the relationship between witnessing interparental violence and later becoming a perpetrator of spouse abuse (men: mean  $r = .21$ ,  $p < .001$ ; women: mean  $r = .13$ ,  $p < .001$ ) ( $Q^b(1) = 6.92$ ,  $p < .01$ ). The setting also had a significant impact on the effect size for the relationship between witnessing interparental violence and later becoming a perpetrator of spouse abuse (community: mean  $r = .11$ ,  $p < .001$ ; clinical: mean  $r = .35$ ,  $p < .001$ ) ( $Q^b(1) = 57.72$ ,  $p < .001$ ).

#### *Victims of Spouse Abuse*

To examine the overall effect of growing up in a violent home and subsequently becoming a victim of spouse abuse, a total of 40 effect-size estimates were computed. Weak to moderate effect sizes emerged from combining these estimates weighted by sample size (mean  $r = .17$ ,  $p < .001$ ) (Table 2). Essentially across effect-size estimates, growing up in a violent home is significantly related to becoming a victim of spouse abuse.

Table 2 also illustrates the effect-size estimate for the relationship between experiencing child abuse and becoming a victim of spouse abuse (mean  $r = .19$ ,  $p < .001$ ) and for witnessing interparental violence and becoming a victim of spouse abuse (mean  $r = .14$ ,  $p < .001$ ). Again, effect sizes that were unspecified were omitted from these analyses. Although the effect sizes for experiencing child abuse and witnessing interpar-

ental violence were not independent (i.e., some of the participants both witnessed interparental violence and experienced child abuse), we ran a between-category test of homogeneity to examine trends. A significant difference existed between the effect-size estimates for witnessing interparental violence and the effect-size estimate for experiencing child abuse and becoming a victim of spouse abuse ( $Q^b(1) = 7.92$ ,  $p < .05$ ). That is, being abused as a child appears to be more strongly related to becoming a victim of spouse abuse than is witnessing interparental abuse.

Table 2 presents the results of various moderator analyses conducted on the victim data set. The gender of the respondent had a significant impact on the effect size for the relationship between growing up in a violent home and later becoming a victim of spouse abuse (male respondents: mean  $r = .09$ ,  $p < .005$ ; female respondents: mean  $r = .18$ ,  $p < .001$ ) ( $Q^b(1) = 9.63$ ,  $p < .005$ ). Growing up in a violent home is more strongly related to becoming a victim of spouse abuse for females than it is for males. The setting from which the samples were derived (clinical or community) also had a significant effect on the relationship between growing up in a violent home and becoming a victim of spouse abuse (community: mean  $r = .15$ ,  $p < .001$ ; clinical: mean  $r = .24$ ,  $p < .001$ ) ( $Q^b(1) = 13.60$ ,  $p < .001$ ). The relationship between growing up in a violent home and subsequently becoming a victim of spouse abuse was stronger in clinical samples than in community samples.

The gender of the respondent also had a significant impact on the effect size for the relationship between experiencing child abuse and later becoming a victim of spouse abuse (males: mean  $r = .08$ ,  $p < .05$ ; females: mean  $r = .21$ ,  $p < .001$ ) ( $Q^b(1) = 10.35$ ,  $p < .005$ ). The effect of experiencing child abuse was a stronger predictor of being a victim of spouse abuse for females than for males. The setting also had a significant impact on the effect size for the relationship between experiencing child abuse and later becoming a victim of spouse abuse (community: mean  $r = .16$ ,  $p < .001$ ; clinical: mean  $r = .25$ ,  $p < .001$ ) ( $Q^b(1) = 7.33$ ,  $p < .01$ ). This relationship was stronger in clinical samples than in community samples.

Gender did not have a significant impact on the size for the relationship between witnessing interparental violence and becoming a spouse abuse victim (males: mean  $r = .10$ ,  $p < .05$ ; females: mean  $r = .14$ ,  $p < .001$ ) ( $Q^b(1) = .97$ ,  $p > .05$ ).

TABLE 2. AVERAGE EFFECT-SIZES FOR THE RELATIONSHIP BETWEEN GROWING UP IN A VIOLENT HOME AND BECOMING A VICTIM OF SPOUSE ABUSE

Variable	Number of Effects	Mean <i>r</i>	Within Category Test of Homogeneity ( <i>Q<sup>w</sup></i> )	Between Category Test of Homogeneity ( <i>Q<sup>b</sup></i> )
Total Sample				
Overall	40	.17****	109.87****	
Experience child abuse	20	.19****	66.07****	7.92*
Witness Interparental abuse	17	.14****	30.12*	
Gender Comparisons				
Male	7	.09***	13.68*	9.63***
Female	33	.18****	86.56****	
Setting Comparisons				
Community	24	.15****	70.94****	13.60***
Clinical	16	.24****	26.53*	
Experience Child Abuse Subsample				
Gender Comparisons				
Male	4	.08*	5.59	10.35***
Female	16	.21****	50.08****	
Setting Comparisons				
Community	11	.16****	43.38****	7.33**
Clinical	9	.25****	15.22	
Witness Interparental Abuse Subsample				
Gender Comparisons				
Male	3	.10*	8.01*	.97
Female	14	.14****	21.15	
Setting Comparisons				
Community	12	.13****	20.83*	4.16*
Clinical	5	.24****	4.92	

\**p* < .05. \*\**p* < .01. \*\*\**p* < .005. \*\*\*\**p* < .001.

However, the setting had a significant impact on the effect size for the relationship between witnessing interparental violence and later becoming a victim of spouse abuse (community: mean *r* = .13, *p* < .001; clinical: mean *r* = .24, *p* < .001) (*Q<sup>b</sup>* (1) = 4.16, *p* < .05).

#### Study-Related Variables

In addition to examining the relationship between domestic violence and the hypothesized variables, we were also interested in understanding whether study-related variables had an influence on effect size. We calculated an average weighted effect size for every study in the sample (*n* = 39), ran Pearson correlation analyses and found that no significant relationship existed between study quality and effect size (*r* = -.26, *p* = .115) or between year of publication and effect size (*r* = -.16, *p* = .115). We ran a one-way analysis of

variance and found that the form of publication (i.e., journal article [*M* = .21, *SD* = .12,] book chapter [*M* = .31, *SD* = .18,] dissertation [*M* = .30, *SD* = .13,] or conference proceedings [*M* = .14, *SD* = .11]) did not predict effect size (*F* = 1.43, *p* = .25). Therefore, none of these study-related variables significantly influenced effect sizes.

#### DISCUSSION

The findings of this meta-analysis provide support for our hypothesis that growing up in an abusive family is positively related to becoming involved in a violent marital relationship. Weighted effect sizes ranged from an *r* value of .08 for the relationship between experiencing violence as a child and subsequently becoming a victim of spouse abuse for men to an *r* value of .35 for the effect of witnessing interparental violence and subse-

quently becoming a perpetrator of domestic violence within the clinical samples. One approach to interpreting the magnitude of obtained effect sizes is to compare them with the range of effects found in other studies. As mentioned earlier, over a wide range of social and behavioral science research, correlations of .10 are considered small, whereas .30 is considered a medium effect size and .50 a large effect size (Cohen, 1969). Therefore, the effect sizes computed in this study ranged from small to medium.

Another way to look at the strength of these effect sizes is to compare them with the results of meta-analyses that examined the relationship of domestic violence with other variables. Sugarman and Frankel (1996) computed effect sizes for domestic violence and attitudes toward violence, attitudes toward women, and gender orientation. They reported a medium effect size ( $d = .71$ ,  $r = .34$ ) for positive attitudes toward the use of violence, and small effect sizes for traditional gender attitudes ( $d = .54$ ;  $r = .26$ ) and for masculine gender orientation ( $d = -.20$ ;  $r = -.10$ ). In addition, Sugarman and Hotelling (1995) calculated a weak effect size ( $r = -.18$ ) for the relationship between involvement in intimate violence and measures of social desirability. Thus, the effect sizes calculated in this study suggest that in general, growing up in a violent home tends to have a weaker relationship to being in a violent adult relationship than does having a positive attitude toward violence or a traditional gender attitude, but a stronger relationship than does having a masculine gender orientation. Although growing up in a violent home appears to have an effect on the likelihood that an individual will become involved in a violent marriage, it is not a strong effect. In fact, the results of a file-drawer analysis (Rosenthal, 1984) demonstrated that only 7.22 studies with null results would be required to negate our findings that there is a significant relationship between growing up in a violent home and perpetrating or experiencing violence as an adult. It is clear that many other variables influence this relationship. More studies will be needed to obtain definitive results.

Our meta-analysis also provides support for differential gender effects. There is a stronger relationship between growing up in a violent home and becoming a perpetrator of spouse abuse for men than for women and for becoming a victim of spouse abuse for women than for men. There was also a stronger relationship between growing up in a violent home and becoming a perpetrator

or victim of spouse abuse for clinical samples than for community samples. In the next section, we discuss the implications of these findings for understanding the intergenerational transmission of spouse abuse.

#### *The Influence of Gender on Becoming a Perpetrator or Victim of Spouse Abuse*

Theoretically, children learn how to behave both by experiencing how others treat them and by observing how their parents interact with others. Transmission of violent behavior is thought to occur through modeling and imitation, failure to learn how to manage conflict appropriately, and reinforcement for violent behavior. Theoretically, this would apply equally to male and female children (Langhinrichsen-Rohling et al., 1995), yet we found a differential gender effect. There are a variety of explanations for why growing up in a violent home may have a stronger relationship to victimization for female offspring and to perpetration for male offspring. One possible explanation may be that children are modeling the behavior of their same-sex parent. Boys may learn the role of perpetrators when their fathers abuse them or they witness their father hit their mother. On the other hand, girls may learn the victim role from watching their mothers in this role. This explanation would be more credible if we were able to document that the gender of the violent parent was differentially related to adult outcomes. There were insufficient numbers of effect sizes available to analyze these gender effects, however. Differential socialization practices may also help to explain these findings. Whereas traditional socialization for boys encourages them to be macho and use violence to settle disputes, traditional expectations for girls include obedience, deference, and loyalty (Sugarman & Frankel, 1996). Boys are reinforced more often for being aggressive, whereas girls are reinforced for being passive. Thus, cultural socialization practices may interact with modeling of same-sex parent behavior, leading to differential effects for boys and girls growing up in violent homes.

#### *The Influence of Research Setting on the Relationship Between Growing Up in a Violent Home and Becoming a Perpetrator or Victim of Spouse Abuse*

The strongest effect sizes in this meta-analysis were related to sample type. That is, growing up

in a violent home was more strongly associated with becoming part of a violent marital relationship (both perpetration and victimization) for clinical samples than for community samples. We suggest several tentative explanations for this pattern. First, clinical studies are based on individuals who are experiencing problems severe enough to bring them to a mental health or violence program. Clinical studies show that a variety of family-of-origin problems are associated with adult dysfunction, such as parental mental illness, alcoholism, divorce, and problematic parent-child relationships (Amato & Keith, 1991). A violent family context during childhood appears to be one of a variety of family problems that predispose individuals to subsequent involvement in violent marriages. This may not be as true for general community samples, however. Our meta-analysis provides evidence that results of clinical studies should not be generalized to the larger community, at least in relation to violence.

The finding that effect sizes are larger in clinical populations may provide support for Michael Johnson's (1995) theory, discussed earlier in this manuscript, that there are two distinct groups of individuals involved in violent relationships and that sampling shelter victims (or men in batterer treatment programs) as opposed to randomly sampling the general population puts researchers in touch with distinct populations of victims and perpetrators. This meta-analysis suggests that there may be distinctly different etiologies for these two different populations as well. It is also possible that the difference between effect sizes in clinical populations and in general population studies may be an artifact of the research methods used, that is, self-report. Batterers frequently engage in distortions such as minimization and denial and excuses to reduce their responsibility for the violence. Battered women also engage in self-blame and denial. Citing violence in one's family of origin may be just another excuse—blame it on their parents. Thus, the data on clinical samples may be less honest than are those found in other populations. We were not able to determine which explanation is more appropriate from this study.

#### *Limitations*

One limitation with this study is that in most of the analyses presented in Table 1 and 2, significant within-group variance remained. One can hold greater confidence in the differences between groups (i.e., the between-category effects;  $Q^b$ )

when the within-group variance is minimal. A second limitation has to do with the fact that the effect sizes for experiencing child abuse and witnessing interparental violence were not independent (i.e., some of the participants both witnessed interparental violence and experienced child abuse). Results of the between-category tests of homogeneity comparing those who experienced with those who have perpetrated should be interpreted with caution.

A third limitation of this meta-analysis is based on the fact that all of the studies used to calculate effect sizes were based on retrospective data. That is, adults were asked about childhood violence after the fact. The reported childhood experiences reflect the personalized definitions of abuse through the recollections of the respondent. There is evidence that people's memories are fallible, and retrospective reports should be viewed with some skepticism. On the other hand, there is also evidence that individuals tend to remember events that produce a strong emotional response with a reasonable degree of accuracy (Simons, Wu, Johnson, & Conger, 1995).

As is true for all meta-analyses, the validity of the analysis is contingent on the authors having located a representative sample of all research conducted on the issue being examined. Although we made a notable effort to locate studies, undoubtedly we omitted some. We also had to eliminate a number of potentially important studies because of insufficient data. Thus, our meta-analysis does not include all of the studies conducted in this substantive area.

#### *Suggestions for Future Research*

Meta-analyses often highlight areas in which more research is needed. In conducting this meta-analysis, we discovered that there were almost no studies providing effect sizes to examine the impact of ethnicity on intergenerational transmission of domestic violence. There also were insufficient numbers of studies that examined the impact of father hitting mother versus mother hitting father or father hitting respondent versus mother hitting respondent. In addition, most of the research focuses on male perpetrators and female victims. Studies need to examine male victims and female perpetrators and ethnic and gender patterns in the intergenerational transmission of domestic violence.

Also, we found a surprisingly large number of studies that did not include the basic statistics

needed to calculate effect sizes (i.e., means, standard deviations, zero-order correlation matrix, sample sizes for all groups). Adequate descriptions of the sample, measures, procedures, and reliability and validity of measures also were omitted frequently. Although journals have space limitations, most data omitted did not require much additional space. As meta-analytic approaches are becoming more common, it becomes increasingly important for future researchers to include basic data needed to compute effect sizes.

Finally, to understand the relationship between intergenerational violence and violence in adult relationships more clearly, we need to start looking at the age-dependent cognitive processes that may mediate this relationship (O'Brien & Chin, 1998). In addition, it is possible that experiencing family-of-origin violence prompts empathy for a potential victim, thus diminishing the impact of this variable. Or, it may generate a narcissistic orientation toward others and a lowered level of empathy. In any event, it appears that research to date scratches the surface of the relationship between family-of-origin violence and domestic violence. Although the intergenerational transmission hypothesis has been well studied, the next step should be to move beyond looking at simple relationships between witnessing violence, experiencing violence, or both in childhood and perpetrating or receiving violence in adulthood. More complex studies are needed to better understand this phenomena.

#### NOTE

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APPENDIX 1. EFFECT SIZE ESTIMATES FOR THE RELATION BETWEEN GROWING UP IN A VIOLENT HOME AND BECOMING A PERPETRATOR OF SPOUSE ABUSE

Study	<i>r</i>	Type	Child	<i>n</i>	Gender	Site
Annette-Barnard, 1984	.41	Diss	Wit	127	F	Cl
Barnett, Martinez, & Bluestein, 1995	.29	Jour	Exp	180	M	Cl
Bowker, 1983	.21	Bk	Exp	146	M	Cl
Bowker, 1983	.16		Wit		M	Cl
Boye-Beaman, Leonard, & Senchak, 1995	.02	Conf	Exp	346	M	Com
Boye-Beaman, et al., 1995	.11		Exp	346	F	Com
Boye-Beaman, et al., 1995	.07		Wit		M	Com
Boye-Beaman, et al., 1995	.04		Wit		F	Com
Brown, 1985	.39	Diss	Exp	40	M	Cl
Brown, 1985	.11		Exp	40	F	Cl
Brown, 1985	.18		Wit		M	Cl
Brown, 1985	.34		Wit		F	Cl
Caesar, 1988	.20	Jour	Exp	44	M	Cl
Caesar, 1988	.35		Wit		M	Cl
Coleman, Weinman, & Hsi, 1980	.38	Jour	Exp/Wit	60	M	Cl
Doumas, Margolin, & John, 1994	.14	Jour	Exp	181	M	Com
Doumas et al., 1994	.16		Exp	181	F	Com
Doumas et al., 1994	.21		Wit		M	Com
Doumas et al., 1994	.14		Wit		F	Com
Dutton, Starzomski, & Ryan, 1996	.37	Jour	Exp/Wit	185	M	Cl
Eaddy, 1982	.53	Diss	Exp	24	M	Cl
Eaddy, 1982	.35		Exp	24	F	Cl
Eaddy, 1982	.65		Wit		M	Cl
Eaddy, 1982	.41		Wit		F	Cl
Fagan, Stewart, & Hansen, 1983	.29	Jour	Exp	270	M	Cl
Fagan et al., 1983	.51		Wit		M	Cl
Hamberger & Hastings, 1991	.24	Jour	Exp	191	M	Cl
Hamberger & Hastings, 1991	.22		Wit		M	Cl
Hastings & Hamberger, 1988	.21	Jour	Exp	168	M	Cl
Hastings & Hamberger, 1988	.21		Wit		M	Cl
Heard, 1992	.19	Diss	Exp	100	M	Cl
Heard, 1992	.38	Diss	Wit		M	Cl
Hofeller, 1982	.29	Bk	Exp	100	M	Cl
Hofeller, 1982	.43		Wit		M	Cl
Johnston, 1988	.43	Ch	Exp	105	M	Cl
Johnston, 1988	.43		Wit		M	Cl
Langhinrichsen-Rohling, Neidig, & Thorn, 95	.17	Jour	Exp	199	M	Cl
Langhinrichsen-Rohling et al., 1995	.07		Exp	199	F	Cl
Leonard & Senchak, 1996	.20	Jour	Exp/Wit	541	M	Com
Lewis, 1987	.40	Jour	Exp	204	M	Cl
Lockhart & White, 1989	.08	Jour	Wit	155	F	Com
Maggio, 1991	.42	Diss	Wit	92	M	Com
Malone, Tyree, & O'Leary, 1989	.12	Jour	Exp	328	M	Cl
Malone et al., 1989	.10		Exp	328	F	Com
Malone et al., 1989	.07		Wit		M	Com
Malone et al., 1989	.17		Wit		F	Com
Mihalic & Elliott, 1997	.04	Jour	Exp	290	M	Com
Mihalic & Elliott, 1997	.10		Exp	360	F	Com
Mihalic & Elliott, 1997	.04		Wit		M	Com
Mihalic & Elliott, 1997	.07		Wit		F	Com
Murphy, Meyer, & O'Leary	.57	Jour	Exp	72	M	Cl
Murphy et al., 1993	.49		Wit		M	Cl
Parle, 1984	.31	Diss	Exp	58	M	Cl
Parnell, 1983	.34	Diss	Exp	46	M	Cl
Parnell, 1983	.32		Wit		M	Cl

APPENDIX 1. CONTINUED

Study	<i>r</i>	Type	Child	<i>n</i>	Gender	Site
Russell, Lipov, Phillips, & White, 1989	.22	Jour	wit	42	M	Cl
Russell et al., 1989	.01		Wit	42	F	Cl
Simons, Wu, Johnson, Conger, 1995	.16	Jour	Exp	333	M	Cl
Simons et al., 1995	.06		Exp	327	F	Com
Star, 1978	.32	Jour	Exp/Wit	58	M	Cl
Stith & Farley, 1993	.09	Jour	Wit	91	M	Cl
Sugarman, Aldarondo, & Boney-McCoy, 1996	.10	Jour	Exp	1151	M	Com
Sugarman et al., 1996	.09		Wit		M	Com

Note: *N* = 7,774. Diss = dissertation; Jour = published journal article; Conf = conference presentation; Bk = Book; Ch = Chapter. Cl = clinical sample, Com = community sample.

APPENDIX 2. EFFECT SIZE ESTIMATES FOR THE RELATIONSHIP BETWEEN GROWING UP IN A VIOLENT HOME AND BECOMING A VICTIM OF SPOUSE ABUSE

Study	<i>r</i>	Type	Child	<i>n</i>	Sex	Site
Annette-Barnard, 1984	.25		Exp	127	F	Cl
Annette-Barnard, 1984	.13		Wit		F	Cl
Arias, 1984	.04	Diss	Wit	369	F	Com
Bowker, 1983	.01	Bk	Exp	146	F	Cl
Bowker, 1983	.07		Wit		F	Cl
Brown, 1985	-.10	Diss	Exp	40	M	Cl
Brown, 1985	.18		Exp	40	F	Cl
Brown, 1985	.48		Wit		M	Cl
Brown, 1985	.22		Wit		F	Cl
Coleman, Weinman, & Hsi 1980	.28	Jour	Exp/Wit	60	F	Cl
Doumas, Margolin, & John, 1994	.04	Jour	Exp	181	M	Com
Doumas et al., 1994	.05		Exp	181	F	Com
Doumas et al., 1994	.10		Wit		M	Com
Doumas et al., 1994	.19		Wit		F	Com
Downs, Miller, Testa, & Panek, 1992	.16	Jour	Exp	291	F	Cl
Gilbert, El-Bassel, Schilling, & Friedman, 97	.35	Conf	Exp	151	F	Cl
Hofeller, 1982	.29	Bk	Exp	100	F	Cl
Hofeller, 1982	.25		Wit		F	Cl
Hotaling & Sugarman, 1990	.10	Jour	Exp	699	F	Com
Hotaling & Sugarman, 1990	.08		Wit		F	Com
Langhinrichsen-Rohling, Neidig, & Thorn, 95	.21	Jour	Exp	199	M	Cl
Langhinrichsen-Rohling, et al., 1995	.36		Exp	199	F	Cl
Leonard & Senchak, 1996	.23	Jour	Exp/Wit	541	F	Com
Lewis, 1987	.34	Jour	Exp	204	F	Cl
Lockhart & White, 1989	.20	Jour	Wit	155	F	Com
Mihalic & Elliott, 1997	.04	Jour	Exp	290	M	Com
Mihalic & Elliott, 1997	.07		Exp	360	F	Com
Mihalic & Elliott, 1997	.04		Wit		M	Com
Mihalic & Elliott, 1997	.07		Wit		F	Com
Nurius, Furrey, & Berliner, 1992	.20	Jour	Exp	106	F	Cl
Nurius et al., 1992	.26		Wit		F	Cl
Parnell, 1983	.32	Diss	Wit	46	F	Cl
Petersen, 1980	.36	Jour	Exp	602	F	Com
Petersen, 1980	.30		Wit		F	Com
Simons, Johnson, Beaman, & Conger, 1993	.08	Jour	Exp	204	F	Com
Star, 1978	-.15	Jour	Exp/Wit	58	F	Cl
Sugarman, Aldarondo, & Boney-McCoy, 1996	.19	Jour	Exp	1363	F	Com
Sugarman et al., 1996	.08		Wit		F	Com
VanHorn, 1997	.26	Conf	Exp	835	F	Com
VanHorn, 1997	.16		Wit		F	Com

Note: Diss = dissertation; Jour = published journal article; Conf = conference presentation; Bk = book, Ch = chapter; Cl = clinical sample, Com = community sample.